

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A semiconductor light-receiving device comprising:

a ~~first conductive type~~ semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said semiconductor substrate comprising a first conductivity type;

a ~~first~~ semiconductor layer formed on said first surface of said semiconductor substrate;

a plurality of first ~~conductive type~~ semiconductor regions formed in said ~~first~~ semiconductor layer so as to reach said semiconductor substrate from a surface of said ~~first~~ semiconductor layer, said plurality of first ~~conductive type~~ semiconductor regions being formed apart from each other, and comprising the first conductivity type;

a second ~~conductive type~~ semiconductor region selectively formed in a surface region of said ~~first~~ semiconductor layer, said second ~~conductive type~~ semiconductor region surrounding each of said plurality of first ~~conductive type~~ semiconductor regions with a surface portion of said ~~first~~ semiconductor layer therebetween and comprising a second conductivity type;

a first electrode formed on said second ~~conductive type~~ semiconductor region; and

a second electrode formed on said second surface of said semiconductor substrate;

said surface portion of said ~~first~~ semiconductor layer between each of said plurality of first ~~conductive type~~ semiconductor regions and said second ~~conductive type~~ semiconductor region having a higher resistance than resistances of said plurality of first ~~conductive type~~ semiconductor regions and said second ~~conductive type~~ semiconductor region.

Claim 2 (Currently Amended): The semiconductor light-receiving device according to claim 1, wherein said second ~~conductive-type~~ semiconductor region has a lattice form or a network form.

Claim 3 (Currently Amended): The semiconductor light-receiving device according to claim 2, wherein said first electrode has the lattice form or the network form and is provided on said second ~~conductive-type~~ semiconductor region.

C Claim 4 (Currently Amended): The semiconductor light-receiving device according to claim 1, wherein said first electrode is formed on part of said second ~~conductive-type~~ semiconductor region.

Claim 5 (Currently Amended): The semiconductor light-receiving device according to claim 1, wherein each of said plurality of first ~~conductive-type~~ semiconductor regions has an island form or a stripe form.

Claim 6 (Currently Amended): The semiconductor light-receiving device according to claim 1, wherein the surface portion of said ~~first~~ semiconductor layer between said second ~~conductive-type~~ semiconductor region and each of said plurality of first ~~conductive-type~~ semiconductor layers is completely depleted in a state in which a reverse bias is applied between said first electrode and said second electrode.

Claim 7 (Currently Amended): A semiconductor light-receiving device comprising:

a ~~first conductive type~~ semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said semiconductor substrate comprising a first conductivity type;

a ~~first~~ semiconductor layer formed on said first surface of said semiconductor substrate;

a plurality of ~~first conductive type~~ semiconductor regions formed in said first semiconductor layer so as to reach said semiconductor substrate from a surface of said ~~first~~ semiconductor layer, said plurality of ~~first conductive type~~ semiconductor regions being formed apart from each other and comprising the first conductivity type;

C a second ~~conductive type~~ semiconductor region selectively formed in a surface region of said ~~first~~ semiconductor layer and having a plurality of openings, each of said plurality of ~~first conductive type~~ semiconductor regions being provided within each of said plurality of openings of said second ~~conductive type~~ semiconductor region respectively with a surface portion of said ~~first~~ semiconductor layer therebetween and comprising a second conductivity type;

a first electrode formed on said second ~~conductive type~~ semiconductor region; and

a second electrode formed on said second surface of said semiconductor substrate;

said surface portion of said ~~first~~ semiconductor layer between each of said plurality of ~~first conductive type~~ semiconductor regions and said second ~~conductive type~~ semiconductor region has a higher resistance than resistances of said plurality of ~~first conductive type~~ semiconductor regions and said second ~~conductive type~~ semiconductor region.

Claim 8 (Currently Amended): The semiconductor light-receiving device according to claim 7, wherein said first electrode has a lattice form or a network form and is provided on said second ~~conductive type~~ semiconductor region.

Claim 9 (Currently Amended): The semiconductor light-receiving device according to claim 7, wherein said first electrode is formed on part of said second ~~conductive type~~ semiconductor region.

Claim 10 (Currently Amended): The semiconductor light-receiving device according to claim 7, wherein each of said plurality of first ~~conductive type~~ semiconductor regions has an island form or a stripe form.

C Claim 11 (Currently Amended): The semiconductor light-receiving device according to claim 7, wherein the surface portion of said ~~first~~ semiconductor layer between said second ~~conductive type~~ semiconductor region and each of said plurality of first ~~conductive type~~ semiconductor regions is completely depleted in a state in which a reverse bias is applied between said first electrode and said second electrode.

Claim 12 (Currently Amended): A semiconductor light-receiving device comprising:
a ~~first conductive type~~ semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said first surface including a plurality of protruded surface portions separated from each other, and said semiconductor substrate comprising a first conductivity type;

a ~~first~~ semiconductor layer selectively formed on said first surface of said semiconductor substrate, said ~~first~~ semiconductor layer having a higher resistance than a resistance of said semiconductor substrate and having a plurality of openings, each of said plurality of protruded surface portions of said first surface being positioned within each of said plurality of openings of said ~~first~~ semiconductor layer respectively;

a ~~second conductive type~~ semiconductor region selectively formed in a surface region of said ~~first~~ semiconductor layer and surrounding each of said plurality of protruded surface portions of said first surface with a surface portion of said ~~first~~ semiconductor layer therebetween, said semiconductor region comprising a second conductivity type;

a first electrode formed on said ~~second conductive type~~ semiconductor region; and

a second electrode formed on said second surface of said semiconductor substrate.

C

Claim 13 (Currently Amended): The semiconductor light-receiving device according to claim 12, wherein said ~~second conductive type~~ semiconductor region has a lattice form or a network form.

Claim 14 (Currently Amended): The semiconductor light-receiving device according to claim 13, wherein said first electrode has the lattice form or the network form and is provided on said ~~second conductive type~~ semiconductor region.

Claim 15 (Currently Amended): The semiconductor light-receiving device according to claim 12, wherein said first electrode is formed on part of said ~~second conductive type~~ semiconductor region.

Claim 16 (Previously Presented): The semiconductor light-receiving device according to claim 12, wherein each of said plurality of protruded surface portions of said semiconductor substrate has an island form or a stripe form.

Claim 17 (Currently Amended): The semiconductor light-receiving device according to claim 12, wherein said surface portion of said ~~first~~ semiconductor layer between said

~~second conductive type region~~ semiconductor ~~layer~~ region and each of said plurality of protruded surface portions of said semiconductor substrate is completely depleted in a state in which a reverse bias is applied between said first electrode and said second electrode.

Claim 18 (Currently Amended): A semiconductor light-receiving device comprising:

a ~~first conductive type~~ semiconductor substrate having a first surface on a light-receiving side and a second surface on the opposite side to said first surface, said first surface including a plurality of protruded surface portions separated from each other, and said semiconductor substrate comprising a first conductivity type;

C a first semiconductor layer selectively formed on said first surface of said semiconductor substrate, said ~~first~~ semiconductor layer having a higher resistance than a resistance of said semiconductor substrate and having a plurality of openings, each of said plurality of protruded surface portions of said first surface being positioned within each of said plurality of openings of said ~~first~~ semiconductor layer respectively;

a ~~second conductive type~~ semiconductor region selectively formed in a surface region of said ~~first~~ semiconductor layer and having a plurality of openings, each of said plurality of protruded surface portions of said first surface being provided within each of said plurality of openings of said ~~second conductive type~~ semiconductor region respectively with a surface portion of said first semiconductor layer therebetween, and said semiconductor region comprising a second conductivity type;

a first electrode formed on said ~~second conductive type~~ semiconductor region; and
a second electrode formed on said second surface of said semiconductor substrate.

Claim 19 (Currently Amended): The semiconductor light-receiving device according to claim 18, wherein said first electrode has a lattice form or a network form and is provided on said ~~second conductive type~~ semiconductor region.

Claim 20 (Currently Amended): The semiconductor light-receiving device according to claim 18, wherein said first electrode is formed on part of said ~~second conductive type~~ semiconductor region.

C
ent
Claim 21 (Previously Presented): The semiconductor light-receiving device according to claim 18, wherein each of said plurality of protruded surface portions of said semiconductor substrate has an island form or a stripe form.

Claim 22 (Currently Amended): The semiconductor light-receiving device according to claim 18, wherein said surface portion of said ~~first~~ semiconductor layer between said ~~second conductive type~~ semiconductor region and each of said plurality of protruded surface portions of said semiconductor substrate is completely depleted in a state in which a reverse bias is applied between said first electrode and said second electrode.
